

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-30 (Cancelled).

31. (Currently amended) A method for stimulating a vagus nerve of a patient ~~during beating heart surgery~~, comprising the steps of:

inserting an electrode into the jugular vein of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve to achieve controlled asystole.

32. (Original) The method of Claim 31,

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting a first electrode into the jugular vein of said patient;

wherein said method comprises the further step of inserting a second electrode into the jugular vein of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

33. (Original) The method of Claim 32, wherein said step of inserting a second electrode into the jugular of said patient in spaced apart relation to said first electrode comprises the step of inserting a second electrode into the jugular vein of said patient approximately one centimeter from said first electrode.

34. (Original) The method of Claim 32, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

35. (Original) The method of Claim 32, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

36. (Original) The method of Claim 31, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

37. (Original) The method of Claim 31, wherein said vagus nerve is stimulated for a period of between about five and fifteen seconds.

38. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

39. (Original) The method of Claim 38, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

40. (Original) The method of Claim 39, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

41. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate impulses having a duration of about 0.4 msec.

42. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

43. (Original) The method of Claim 42, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

44. (Currently amended) The method of Claim 31, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, [a] an electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

45. (Currently amended) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve controlled asystole.

46. (Currently amended) A method for stimulating a vagus nerve of a patient ~~during beating heart surgery~~, comprising the steps of:

positioning an electrode on the neck of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vague nerve to achieve controlled asystole.

47. (Original) The method of Claim 46,

wherein said step of positioning an electrode on the neck of said patient comprises the step of positioning a first electrode on the neck of said patient;

wherein said method comprises the further step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

48. (Original) The method of Claim 47, wherein said step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode comprises the step of positioning a second electrode on the neck of said patient approximately one centimeter from said first electrode.

49. (Original) The method of Claim 47, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

50. (Original) The method of Claim 47, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

51. (Original) The method of Claim 46, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

52. (Original) The method of Claim 51, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

53. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

54. (Original) The method of Claim 53, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

55. (Original) The method of Claim 54, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse of about forty Hertz.

56. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

57. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

58. (Original) The method of Claim 57, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

59. (Currently amended) The method of Claim 46, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, [a] an electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

60. (Currently amended) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vague nerve to achieve controlled asystole.

Claims 61-130 (Cancelled).

131. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting a first electrode into a jugular vein of said patient;

placing a second electrode on the neck of said patient; and

actuating at least one of said electrodes to create an electrical field which stimulates said vagus nerve.

132. (Currently amended) The method of Claim 131, wherein said step of ~~positioning~~ placing a second electrode on the neck of said patient comprises the step of ~~positioning~~ placing a second electrode on the neck of said patient at a location approximately one centimeter from said first electrode in said jugular vein of said patient.

133. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

134. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

135. (Original) The method of Claim 131, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

136. (Original) The method of Claim 135, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

137. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of applying an impulse to at least one of said electrodes at a frequency of between about one Hertz and about five hundred Hertz.

138. (Original) The method of Claim 137, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

139. (Original) The method of Claim 138, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

140. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating at least one of said electrodes to generate electrical impulses having a duration of 0.4 msec.

141. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about one to about forty volts.

142. (Original) The method of Claim 141, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about two to about six volts.

143. (Currently amended) The method of Claim 131, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, [a] an electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

144. (Original) The method of Claim 131, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

Claims 145-146 (Cancelled).

147. (Previously presented) The method of Claim 31,

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting more than one electrode into the jugular vein of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

148. (Previously presented) The method of Claim 147, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

149. (Previously presented) The method of Claim 46,

wherein said step of inserting an electrode into the neck of said patient comprises the step of inserting more than one electrode into the neck of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

150. (Previously presented) The method of Claim 149, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

Claims 151-154 (Cancelled).

155. (Currently amended) The method of Claim 131,

wherein said step of inserting ~~an~~ a first electrode into the jugular vein of said patient comprises the step of inserting more than one electrode into the jugular vein of said patient;

wherein said step of ~~inserting an~~ placing a second electrode into the neck of said patient comprises the step of ~~inserting~~ placing more than one electrode into the neck of said patient;

further wherein each electrode of said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

156. (Previously presented) The method of Claim 155, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

157. (Previously presented) A method of stimulating a vagus nerve of a patient, comprising the steps of:

inserting an electrode into the jugular vein of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve to achieve asystole.

158. (Previously presented) The method of Claim 157,

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting a first electrode into the jugular vein of said patient;

wherein said method comprises the further step of inserting a second electrode into the jugular vein of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

159. (Previously presented) The method of Claim 158, wherein said step of inserting a second electrode into the jugular of said patient in spaced apart relation to said first electrode comprises the step of inserting a second electrode into the jugular vein of said patient approximately one centimeter from said first electrode.

160. (Previously presented) The method of Claim 158, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

161. (Previously presented) The method of Claim 158, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

162. (Previously presented) The method of Claim 157, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

163. (Previously presented) The method of Claim 162, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

164. (Previously presented) The method of Claim 157, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

165. (Previously presented) The method of Claim 164, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

166. (Previously presented) The method of Claim 165, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

167. (Previously presented) The method of Claim 157, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

168. (Previously presented) The method of Claim 157, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

169. (Previously presented) The method of Claim 168, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

170. (Currently amended) The method of Claim 157, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, [a] an electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

171. (Currently amended) A method for stimulating a vagus nerve of a patient, comprising the steps of:

positioning an electrode on the neck of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve to achieve controlled asystole.

172. (Previously presented) The method of Claim 171,

wherein said step of positioning an electrode on the neck of said patient comprises the step of positioning a first electrode on the neck of said patient;

wherein said method comprises the further step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

173. (Previously presented) The method of Claim 172, wherein said step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode comprises the step of positioning a second electrode on the neck of said patient approximately one centimeter from said firsts electrode.

174. (Previously presented) The method of Claim 172, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

175. (Previously presented) The method of Claim 172, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

176. (Previously presented) The method of Claim 171, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

177. (Previously presented) The method of Claim 176, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

178. (Previously presented) The method of Claim 171, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

179. (Previously presented) The method of Claim 178, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

180. (Previously presented) The method of Claim 179, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

181. (Previously presented) The method of Claim 171, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

182. (Previously presented) The method of Claim 171, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

183. (Previously presented) The method of Claim 182, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

184. (Currently amended) The method of Claim 171, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, [a] an electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

185. (Currently amended) A method for stimulating a vagus nerve of a patient to ~~during beating heart surgery,~~ comprising the steps of:

placing an electrode at a suitable location for vagus nerve stimulation; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve to achieve controlled asystole.